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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/408,826	09/29/99	PETROVIC	B 43849-2

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EXAMINER

BETTENDORF, J

ART UNIT

PAPER NUMBER

2817

DATE MAILED:

04/26/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/408,826

Applicant(s)
PETROVIC

Examiner
Justin P. Bettendorf

Art Unit
2817



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Sep 29, 1999 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other:

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DETAILED ACTION

Priority

1. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification (37 CFR 1.78).

Drawings

2. The drawings are objected to because figures 2 and 5 do not appear to be in the application. Correction is required.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "716" in figure 33(d). Correction is required.

The applicant is required to provide a copy of the drawings with proposed drawing changes marked in red ink.

Specification

4. The disclosure is objected to because of the following informalities: The detailed description of the drawings is confusing because it jumps from one drawing to another which are out of order (e.g. figure 31 is described after figure 34a-d on pages 30 and 31). The equation on

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page 28 in line 15 has “b/d” with “d << b” which is confusing (such a ratio would have a great value and not a small value as disclosed - perhaps it should read --d/b--). Also, on page 30, line 17 states “actual values for the capacitance and inductance elements are disclosed”; nevertheless, the specification does not appear to disclose these values. Appropriate correction is required.

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: “the product of said first capacitance and said first inductance ...” as recited in claim 1 and the subject matter of claims 3 and 10.

Claim Objections

6. Applicant is advised that should claims 3-7 and 10-14 be found allowable, these claims will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any

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person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 4, 11, and 15 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification needs to disclose how the coupling is maintained optimal between the resonators through a range of frequencies by altering the physical proximity between the inductive elements of the resonators as recited in claims 4, 11, and 15 (i.e. how is the proximity changed through a range of frequencies). Additionally, claim 15 recites reducing the value of L and increasing the value of C as frequency increases, but there does not appear to be a description of how one skilled in the art would perform this function based on the frequency. Without this information, one skilled in the art would be required to perform undue experimentation in order to make and/or use the invention

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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10. Claims 1, 3, 8, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Cawein U.S. Patent No. 2,457,774.

The Cawein reference discloses in figure 1 a circuit comprising: a first resonator 15 having first and second capacitors 20, 23 and inductors 21, 24, and 22; and a second resonator 16 having first and second capacitors 26, 28 and inductors 25, 27, 30. The inductors 22 and 25 are magnetically coupled (col. 2, lines 50-55) and the current flowing through inductor 22 (the signal line is through inductor 21) is inherently opposite to the current flowing into either inductors 24 or 21 (same for resonator 16). The ground connections are shown. The specification discloses that the capacitances and inductors all have the same value (col. 3, lines 25-30).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 2, 5-7, 9, 12, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cawein.

With respect to claims 2 and 9, the Cawein reference discloses a coupling capacitor 10 to the input resonator 15 but does not show a coupling capacitor at the output of resonator 16.

Nevertheless, such coupling capacitors are well-known in order to block unwanted DC.

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Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a blocking capacitor to the output of resonator 16 in the device of Cawein because such a modification would have advantageously removed unwanted DC.

With respect to claims 5 and 12, it would have been obvious to form the inductors as planar inductors because such a modification allows surface mounting the inductors on a circuit board.

With respect to claim 6 and 13, multiple lines forming a "ladder" inductor are well-known and the use thereof would have been obvious because these type of inductors advantageously allow changing the inductance (i.e. form trimmable inductors).

With respect to claims 7 and 14, it would have been obvious to have used multiple capacitors to reduce parasitic capacitances for many reasons. First of all, as would have been well-known, capacitors come in certain values which require combining in parallel to achieve the desired value. Additionally, it would have been obvious to have used a trimmable capacitor in parallel with a fixed capacitor because this would allow trimming down to a certain minimum value which is conventional practice.

Conclusion

It should be noted that the lack of prior art rejections of claims 4, 11, and 15 should not be construed that a determination of allowable subject matter has been made because it is not clear what structure is being recited.

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13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Knutson et al. U.S. Patent No. 4,035,695 discloses a microelectronic variable inductor shaped as a ladder.

b. Saitoh et al. U.S. Patent No. 5,898,403 shows in figure 3 a trimmable capacitor in parallel with a fixed capacitor.

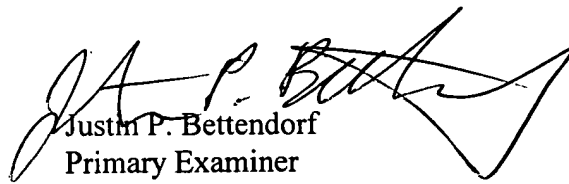
c. Atokawa JP 5-347528 discloses magnetically coupled resonators on a substrate.

d. Norton U.S. Patent No. 1,954,943 discloses in figure 1 magnetically coupled resonators.

e. Brailsford U.S. Patent No. 2,282,113 discloses a BPF with adjustable coupling.

f. Pfitzenmaier DT 2738613 discloses a BPF with multiple resonators.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Bettendorf whose telephone number is (703) 308-2780 and FAX number is (703) 308-7722.


Justin P. Bettendorf
Primary Examiner
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jpb
April 24, 2001